

What is claimed is:

- 1 1. A removable disk drive apparatus, comprising:
 2 a tray on which a plurality of concave portions for a
 3 disk for supporting disk storage media having different
 4 diameters are formed in concentric positions, wherein
 5 said tray comprises:
 6 larger disk support lugs provided at plural points on
 7 a periphery of a concave portion for a larger diameter disk;
 8 and
 9 smaller disk support lugs provided at plural points on
 10 a periphery of a concave portion for a smaller diameter disk;
 11 said smaller disk support lugs including:
 12 a storage groove provided at a plurality of points on
 13 the periphery of the concave portion for a larger diameter
 14 disk;
 15 flexible lugs with elastic deformation supported in said
 16 storage groove, and having tip portions projecting into the
 17 periphery of the concave portion for a smaller diameter disk;
 18 and
 19 a stopper to keep the tip portions of the flexible lugs
 20 projecting above a surface of the periphery of the concave
 21 portion for a smaller diameter disk from the storage groove.

- 1 2. The removable disk drive apparatus according to claim
 2 1, wherein

1 3. The removable disk drive apparatus according to claim
2 2, wherein

[illegible]

3 said flexible lugs are elastic metal plates.

3 said stopper is configured by projections projecting
4 opposite each other on both sides of the storage groove, and
5 when the flexible lugs are subject to elastic deformation,
6 they pass over the stopper to suppress restoration of the
7 elasticity.

3 said stopper is configured by projections projecting
4 opposite each other on both sides of the storage groove, and
5 when the flexible lugs are subject to elastic deformation,
6 they pass over the stopper to suppress restoration of the
7 elasticity.

3 said stopper is configured by projections projecting
4 opposite each other on both sides of the storage groove, and
5 when the flexible lugs are subject to elastic deformation,
6 they pass over the stopper to suppress restoration of the
7 elasticity.

3 said smaller disk support lugs are provided at least two
4 points below and along the periphery of the concave portion
5 for a smaller diameter disk.

3 said smaller disk support lugs are provided at least two
4 points below and along the periphery of the concave portion
5 for a smaller diameter disk.

1 10. The removable disk drive apparatus according to claim
2 3, wherein

3 said smaller disk support lugs are provided at least two
4 points below and along the periphery of the concave portion
5 for a smaller diameter disk.

1 11. The removable disk drive apparatus according to claim
2 4, wherein

3 said smaller disk support lugs are provided at least two
4 points below and along the periphery of the concave portion
5 for a smaller diameter disk.

1 12. The removable disk drive apparatus according to claim
2 5, wherein

3 said smaller disk support lugs are provided at least two
4 points below and along the periphery of the concave portion
5 for a smaller diameter disk.

1 13. The removable disk drive apparatus according to claim
2 6, wherein

3 said smaller disk support lugs are provided at least two
4 points below and along the periphery of the concave portion
5 for a smaller diameter disk.

1 14. The removable disk drive apparatus according to claim
2 7, wherein

3 said smaller disk support lugs are provided at least two
4 points below and along the periphery of the concave portion
5 for a smaller diameter disk.

1 15. A removable disk drive apparatus, comprising:

2 a tray on which a plurality of concave portions for a
3 disk for supporting disk storage media having different
4 diameters are formed in the concentric positions, wherein
5 said tray comprises:

6 larger disk support lugs provided at a plurality of points
7 on a periphery of a concave portion for a larger diameter disk;

8 a storage groove provided at a plurality of points on
9 the periphery of the concave portion for a smaller diameter
10 disk;

11 said storage groove including:

12 a first concave portion provided opposite each other in
13 the radial direction in a position closer to a center of the
14 concave portion for a smaller diameter disk on both sides of
15 said storage groove; and

16 a second concave portion opposite each other in the radial
17 direction in the position apart from the center of the concave
18 portion for a smaller diameter disk; and

19 a rotating lug provided in said storage groove, and having
20 a first convex portion and a second convex portion on both
21 sides respectively corresponding to said first and second
22 concave portions in the storage groove;

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23 said rotating lugs being supported as rotatable by fitting
 24 the second convex portion into the second concave portion in
 25 the storage groove; and

26 said rotating lugs rotating using as an axis the second
 27 convex portion on both sides fit into the second concave portion
 28 when the first convex portion is removed from the first concave
 29 portion on both sides, the rear ends of the rotating lugs touch
 30 the storage groove when the first convex portion on both sides
 31 passes over the edge which is a boundary between the concave
 32 portion for a larger diameter disk and the storage groove,
 33 thereby holding a state in which the tip portion of a smaller
 34 disk diameter projects above the surface of the periphery of
 35 the concave portion for a smaller diameter disk from the storage
 36 groove.

1 16. The removable disk drive apparatus according to claim
 2 15, wherein

3 said front convex portions on both sides and corresponding
 4 front concave portions are hemispherical, and said rear convex
 5 portion on both sides and corresponding rear concave portions
 6 are cylindrical.

1 17. The removable disk drive apparatus according to claim
 2 15, wherein

3 said rotating lugs branch off in three units from one
 4 plate, the branch units on both ends are radially spread on
 5 the concave portion for a larger diameter disk, and a distance

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6 between both outer sides of the branch units is formed a little
larger than a width of the storage groove.

1 18. The removable disk drive apparatus according to claim
2 16, wherein

3 said rotating lugs branch off in three units from one
4 plate, the branch units on both ends are extend up and down,
5 and a distance between the divided units on both ends is formed
6 a little larger than a width of the storage groove.

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11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100-101-102-103-104-105-106-107-108-109-110-111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000-1001-1002-1003-1004-1005-1006-1007-1008-1009-1010-1011-1012-1013-1014-1015-1016-1017-1018-1019-1020-1021-1022-1023-1024-1025-1026-1027-1028-1029-1030-1031-1032-1033-1034-1035-1036-1037-1038-1039-1040-1041-1042-1043-1044-1045-1046-1047-1048-1049-1050-1051-1052-1053-1054-1055-1056-1057-1058-1059-1060-1061-1062-1063-1064-1065-1066-1067-1068-1069-1070-1071-1072-1073-1074-1075-1076-1077-1078-1079-1080-1081-1082-1083-1084-1085-1086-1087-1088-1089-1090-1091-1092-1093-1094-1095-1096-1097-1098-1099-1100-1101-1102-1103-1104-1105-1106-1107-1108-1109-1110-1111-1112-1113-1114-1115-1116-1117-1118-1119-1120-1121-1122-1123-1124-1125-1126-1127-1128-1129-1130-1131-1132-1133-1134-1135-1136-1137-1138-1139-1140-1141-1142-1143-1144-1145-1146-1147-1148-1149-1150-1151-1152-1153-1154-1155-1156-1157-1158-1159-1160-1161-1162-1163-1164-1165-1166-1167-1168-1169-1170-1171-1172-1173-1174-1175-1176-1177-1178-1179-1180-1181-1182-1183-1184-1185-1186-1187-1188-1189-1190-1191-1192-1193-1194-1195-1196-1197-1198-1199-1200-1201-1202-1203-1204-1205-1206-1207-1208-1209-1210-1211-1212-1213-1214-1215-1216-1217-1218-1219-1220-1221-1222-1223-1224-1225-122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